

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing Of Claims:

1. (Currently Amended) A method to monitor localization, posture, movement or properties of one or several objects to be monitored in an environment to be monitored, wherein in ~~some~~ the area of the environment to be monitored there is a transducer which is composed of a distribution of conductors, which are electrically insulated from the object and said distribution of ~~conductor~~ conductors includes at least a first division of selectable conductors and a second division of selectable conductors, the method comprising the steps of

- a) selecting the conductors of the first division of conductors and conductors of the second division of conductors and connecting an excitation signal to the selected first division of conductors and performing a scanning cycle of the selected divisions of the selected conductors when the excitation signal is connected to the first division of the selected conductors;
- b) deriving a first signal from a coupling of the excitation signal between the first and the second selected divisions of conductors, and processing said first signal to obtain information about impedance of the object for characterization of the object.

2. (Previously Presented) The method according to claim 1 wherein said scanning cycle is repeated by selecting the first or second division of conductors to contain one or several conductors other than the conductors of the first or second division of conductors selected during a previous scanning.

3. (Previously Presented) The method according to claim 1 wherein from said first signal one derives information about essentially internal properties of the object.

4. (Previously Presented) The method according to claim 1 wherein from said first signal information which is characteristic to the object is derived,

wherein the information includes information about electrical conductivity and variations in that electrical conductivity, and

wherein said information is used to recognize the object.

5. (Previously Presented) The method according to claim 1 wherein the excitation signal evokes a second signal in a special means and the second signal is received by a receiving means.

6. (Previously Presented) The method according to claim 5 wherein said second signal contains information related to the object.

7. (Currently Amended) The method according to claim 5 wherein information derived from one or both of said first and second signals is evaluated to form an evaluation using criteria which are either fixed, preset or adaptable and, based on results of the evaluation, the method further comprises performing a known action.

8. (Previously Presented) The method according to claim 5 wherein information derived from one or both of said first and second signals is stored in memory means in order to observe temporal dependence of behavior of environments to be monitored and of objects.

9. (Previously Presented) The method according to claim 5 wherein information derived from one or both of said first and second signals is used to adapt a status of artificial intelligence.

10. (Previously Presented) An arrangement to monitor localization, posture, movement or properties of one or several objects to be monitored in an environment to be monitored wherein the arrangement includes:

- a) transducer means which is composed of a distribution of conductors, which are galvanically isolated from the object, the distribution of conductors including at least a first division of selectable conductors and a second division of selectable conductors;
- b) means to perform a scanning cycle of the second division of selectable conductors;
- c) means to generate an excitation signal during the scanning cycle;
- d) means to selectively connect said excitation signal to the first division of selectable conductors of the transducer means;
- e) means to derive a first signal which is related to a coupling through impedance of the object; and

f) means for detecting changes of the impedance of the object to be monitored for obtaining information about characteristic features of the object to be monitored.

11. (Previously Presented) The arrangement according to claim 10 wherein the arrangement further includes a signal processing means to process the first signal from transducer means and to derive information related to properties of the object.

12. (Previously Presented) The arrangement according to claim 11 wherein the signal processing means includes means to transfer information derived from an object forward via a first transmission path.

13. (Previously Presented) The arrangement according to claim 10 wherein the transducer means includes components to detect at least two different physical quantities.

14. (Previously Presented) The arrangement according to claim 10 wherein the first signal produced by the transducer means is based at least partially on an electric field coupling between the object and the transducer means.

15. (Currently Amended) The arrangement according to claim 11 wherein the signal processing means includes means which are ~~capable of performing~~ arranged to perform adaptive functions or other means of artificial intelligence.

16. (Previously Presented) The arrangement according to claim 10 wherein the arrangement includes means to store spatial information related to the transducer means.

17. (Previously Presented) The arrangement according to claim 12 wherein via the transducer means information about localization of at least one division of selectable conductors and means to transfer this information is forwarded via a second transmission path.

18. (Previously Presented) The arrangement according to claim 10 wherein the arrangement includes a special means, which generates a second signal by an effect of the excitation signal.

19. (Previously Presented) The arrangement according to claim 10 wherein the arrangement includes means to form a contact via a transmission path to be used in receiving or transmitting control information, in receiving or transmitting localization information or receiving or transmitting time information or for other communication with other systems.

20. (Currently Amended) The arrangement according to claim 18 wherein information derived from the first signal, the second signal and/or the excitation signal, or combinations thereof, is used to perform control functions with some means of the arrangement

arrangements, wherein the control functions include controlling a robot, lighting, air conditioning, alarm systems, announcement systems or locking.

21. (Previously Presented) The arrangement according to claim 10 wherein the arrangement includes means to derive information characterizing movement of an object.

22. (Previously Presented) The arrangement according to claim 10 wherein at least one division of selectable conductors of the transducer means are placed near a floor, a wall or a ceiling surface, on which or near which an object has access.

23. (Previously Presented) The arrangement according to claim 10 wherein at least one division of selectable conductors of the transducer means are placed near surfaces of the environment to be monitored.

24. (Previously Presented) The arrangement according to claim 10 wherein at least one division of selectable conductors of the transducer means is realized by using some conductors which are in construction elements of the environment to be monitored.

25. (Previously Presented) The arrangement according to claim 18 wherein the special means includes means to implement information in the second signal generated by the special means.

26. (Previously Presented) The arrangement according to claim 18 wherein one or several properties of the excitation signal are different when the second signal generated by the special means is evoked referenced to localization of an object.

27. (Previously Presented) The method according to claim 1, wherein one or several objects to be monitored include a human body, an animal or a robot.

28. (Previously Presented) The method according to claim 1, wherein the environment to be monitored includes a residence, a public space, an industrial space, an office space or an animal shelter.

29. (Previously Presented) The method according to claim 1, wherein the area of the environment to be monitored includes a floor, a wall, or a ceiling.

30. (Previously Presented) The method according to claim 3, wherein internal properties of the object include an electric conductivity and its variations, a distribution of tissues in a body, a distribution of fluids, or a function of the heart or respiration.

31. (Previously Presented) The method according to claim 8, wherein at a certain moment registered information which is derived from the first or second signals is stored and this information is used as reference information for derived information at a later moment.

32. (Previously Presented) The arrangement according to claim 10, wherein one or several objects to be monitored include a human body, an animal or a robot.

33. (Previously Presented) The arrangement according to claim 10, wherein the environment to be monitored includes a residence, a public space, an industrial space, an office space or an animal shelter.

34. (Previously Presented) The arrangement according to claim 11, wherein properties of the object include a function of the heart, respiration or an electric conductivity.

35. (Previously Presented) The arrangement according to claim 12, wherein the first transmission path includes a telephone network or a digital television network.

36. (Previously Presented) The arrangement according to claim 13, wherein the at least two different physical quantities include electrical coupling and acoustic energy.

37. (Previously Presented) The arrangement according to claim 23, wherein the environment to be monitored includes an area surrounding a hazardous substance, an area surrounding a piece of artwork or an area surrounding an artifact.

38. (Previously Presented) The arrangement according to claim 24, wherein construction elements include concrete, iron, air conditioning pipes, air conditioning ducts, water pipes or electrical conductors.

39. (Previously Presented): The arrangement according to claim 25, wherein the special means includes a RFID circuit, a transducer or an active circuit.